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Susan M. Donahue
Rockwell Automation, Inc. 704-P
1201 South Second Street
Milwaukee, WI 53204

EXAMINER	
NORTON, JENNIFER L	
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2121	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/675,535	FARCHMIN, DAVID W.	
	Examiner	Art Unit	
	JENNIFER L. NORTON	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-23,25-46,48-54,56-60 and 62-69* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-23,25-46,48-54,56-60 and 62-69* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a **Final Office Action** in response to the Remarks/Amendment received on 11 November 2009. Claims 2, 24, 47, 55, 61 and 70 have been previously cancelled. Claims 1, 3-23, 25-46, 48-54, 56-60 and 62-69 are pending in this application.

Response to Arguments

2. Applicant's arguments, see Remarks pgs. 1-6, filed 11 November 2009 with respect to claims 1, 3-23, 25-46, 48-54, 56-60 and 62-69 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

3. In regards to Applicant's argument that De Meyer does not teach, "the wireless receives may, should or could be included in stationary interface devices where the interface devices also include at least one of an input device and a display" (Remarks, pg. 2, par. 1); the Examiner recognizes the Applicant has not accounted for the combination of embodiments of De Meyer under 35 U.S.C 103(a) for this limitation as set forth above and in the Non-Final Office Action, mailed on 30 October 2007.

> Furthermore, De Meyer teaches (pg. 1, par. [0003]), "Technical installations include all types of technical equipment and systems, both individually in stand-alone arrangements and interconnected in data networks, e.g., via a field bus. In industrial applications, such technical installations include individual apparatuses, such as drives and processing machines. However, a technical installation can also be a production plant, in which an entire technical process is operated by locally distributed control apparatuses. Such a production facility is, for example,

a chemical facility or an assembly line. Technical installations are controlled and operated by special digital data processing systems, which are also referred to as automation systems. Such systems include devices for the direct control of the technical installation, i.e., programmable logic controllers or PLCs. To relieve these controllers, automation systems have other special devices that form an interface for operator personnel. These devices are called "control and monitoring" devices, ("C&M" for short), or HMI devices, i.e., human machine interfaces."

(pg. 1, par. [0004]) "The term "HMI device" is a generic term and includes all the components belonging to this group of devices, such as, e.g., operator panels (OP for short). These operator panels can be stationary or mobile devices. In a networked automation system, operator personnel use HMI devices to display and control process data of the technical installation to be controlled. This function is referred to as "supervisory control and data acquisition" (SCADA). For this purpose, the HMI device usually has a special hardware structure, i.e., it is provided, for example, with a touch screen and is specially shielded against environmental influences. The HMI devices also use a special type of software, which provides functions to improve operational ease of use, quality and safety when the HMI devices are operated by an operator. For example, HMI devices can visualize, control, design and generate interactive process images or representations of the technical installation to be controlled. This makes it possible to selectively display responses of the technical installation, typically in the form of measured values and messages. In addition, specific operator actions and data inputs make it possible to bring the technical installation into desired states."

(pg. 1, par. [0006]) "However, such a fixed, data-related allocation or assignment of an HMI device to an automation system and the technical installation connected thereto has drawbacks. Since all the machine and control specific data of the installation is fixedly stored in the HMI device, the flexibility of such an HMI device is usually limited. Therefore, these HMI devices are often stationary and mounted in the immediate spatial environment of the associated technical installation. Thus, an operator has to go to the location of the respective HMI device and is therefore limited in his or her freedom to move. Furthermore, both the HMI device and the operator are continuously exposed to the environmental conditions present at the mounting site."

(pg. 1, par. [0007]) "If such an HMI device must be replaced, all the machine and control specific data must be reloaded in order to

> completely restore the operability of the original HMI device. Even if the HMI devices are mobile, e.g., in the form of cable-bound or radio-linked handheld devices, they are typically allocated or assigned to a technical installation or to a control apparatus thereof in logically unique manner. Again, this typically means that all the design, display and machine data has to be loaded into the handheld device; i.e., the data must be kept available for all possible monitoring and control situations, irrespective of how frequently the data is actually used. As a consequence, the hardware and software for such HMI devices must be powerful enough and, thus, if such devices fail and have to be replaced, significant costs may be incurred."

In summary, it would have been know to those of at least one of ordinary skill in the field of communications and interfaces would have used the tools at hand, specifically, a stationary human machine interface (HMI) device including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device since at the time of Applicant's invention was shown to be known in the art wherein an human-machine interface (HMI) device is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.). Moreover, the courts have held that "A reference anticipates a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention." *In re Graves, 36 USPQ2d*

1697 (Fed. Cir. 1995); In re Sase, 207 USPQ 107 (CCPA 1980); In re Samour, 197 USPQ 1 (CCPA 1978).

> In re Graves, (CA FC) 36 USPQ2d 1697: "Rockwell nevertheless anticipates claim 4, even if it does not specifically disclose simultaneous monitoring of the output points, if simultaneous or parallel monitoring is within the knowledge of a skilled artisan. See, e.g., In re LeGrice, 301 F.2d 929, 133 USPQ 365 (CCPA 1962) (A reference anticipates a claim if it discloses the claimed invention "such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention." Id. at 936, 133 USPQ at 372 (emphasis in original)); In re Donohue, 766 F.2d 531, 533, 226 USPQ 619, 621 (Fed. Cir. 1985) (same) (citing In re LeGrice, 301 F.2d at 939, 133 USPQ at 373-74). Even the applicant, in item 12 of his request for reconsideration of the Board's 30 September 1994 decision, stated that one with knowledge of "basic electronics and simple logic" would understand the difference between the operation of the series circuit of Rockwell and the parallel circuit of the claimed invention. Thus, even under the dissent's construction of claim 4, the Board correctly held that a skilled artisan could take Rockwell's teachings in combination with his own knowledge and be in possession of the device of applicant's claim 4."

4. With respect to the Applicant's arguments, "In addition, despite the Examiner's assertion that De Meyer does not way from the stationary HMIs, Applicant is clear that De Meyer does teach away." The Examiner respectfully disagrees. See MPEP 2123, recited below for convenience:

> MPEP 2123 states:
>
> "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ423 (CCPA 1971). "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 27 F.3d 551, 554, 31 USPQ2d

> 1130, 1132 (Fed. Cir. 1994) (The invention was directed to an epoxy impregnated fiber-reinforced printed circuit material. The applied prior art reference taught a printed circuit material similar to that of the claims but impregnated with polyesterimide resin instead of epoxy. The reference, however, disclosed that epoxy was known for this use, but that epoxy impregnated circuit boards have "relatively acceptable dimensional stability" and "some degree of flexibility," but are inferior to circuit boards impregnated with polyesterimide resins. The court upheld the rejection concluding that applicant's argument that the reference teaches away from using epoxy was insufficient to overcome the rejection since "Gurley asserted no discovery beyond what was known in the art." 27 F.3d at 554, 31 USPQ2d at 1132.). Furthermore, "[t]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton,391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

5. Applicant argues that the prior art fails to teach, "transmitting strength data from any device to any other device. More specifically, De Meyer fails to teach or suggest a WID transmitting signal strength data to a second processor so that the second processor can use the signal strength data to determine WID location." (Remarks pg. 5, par. 2) The Examiner respectfully disagrees.

As previously addressed in the Office Action mailed on 30 October 2007 of paragraph 74:

> De Meyer discloses (pg. 8, par. [0076]) "In the exemplary embodiment of FIG. 8, the mobile control and monitoring module MU receives and analyzes, in a first step, short-range fields so as to determine the position of the module MU. These short-range fields are, in particular, emission signals of neighboring HMI communications modules. **In FIG. 8, these emission signals are, for example, emission signals AP5S, AP6S of the third and fourth HMI communications module AP5, AP6, in particular field strengths emitted therefrom.** In a second step, as illustrated in FIG. 9, the mobile control and monitoring

> module MU sends transmission messages PAP6 to the closest HMI communications module AP6. The transmission messages PAP6 contain, in particular, position data, and the closest HMI communications module AP6 is, in this case, coupled to the end of the data bus or data network CN, for example. As illustrated in FIG. 10, since the mobile communications and monitoring module MU is now assigned to the regional control area OA4 and, thus, to the technical installation M4, data messages DAP6, which are provided by the central server CS, are transmitted, in a third step, to the mobile control and monitoring module MU. The transmission of the data messages DAP6 takes place, e.g., via the closest HMI communications module AP6, and the data messages DAP6 contain, in particular, associated HMI display data and/or HMI initialization data."

> (pg. 8, par. [0077]) "**In contrast, in the exemplary embodiment of FIG. 11, emissions MUS of the mobile control and monitoring module MU are received, in a first step, by neighboring HMI communications modules, e.g., the modules AP5, AP6, and are analyzed to determine the position of the mobile control and monitoring module MU. The receiving devices in the HMI communications modules that are required for this purpose are configured, e.g., as GSM, GPRS or WLAN transmitting and receiving devices. The position is then determined by analyzing these emissions, either in an HMI communications module or in the central server.** As illustrated in FIG. 12, since the mobile control and monitoring module MU is now assigned to the regional control area OA4 and, thus, to the technical installation M4, data messages DAP6, which are provided by the central server CS, are transmitted, in a third step, to the mobile control and monitoring module MU. The transmission of the data messages DAP6 takes place, e.g., via the closest HMI communications module AP6, and the data messages DAP6 contain, in particular, associated HMI display data and/or HM initialization data."

Therefore, De Meyer discloses a second processor (an HMI communications module or the central server) separate from the MU that determines the position of the device MU as highlighted above of pg. 8, par. [0077] of De Meyer; and the WID does

transmit signal strength information as highlighted above of pg. 8, par. [0076] of De Meyer.

6. Claims 1, 3-23, 25-46, 48-54, 56-60 and 62-69 stand rejected under 35 U.S.C. 103(a) as set forth below.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 3, 5, 7, 9, 11-23, 25, 26, 28-33, 35-42, 44, 48, 50, 51, 54, 56-60 and 62-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2005/0021158 (hereinafter De Meyer).

9. As per claim 1, De Meyer teaches an apparatus for use in an automated environment including at least a first automated assembly including a plurality of components that facilitate an automated process, at least one portable wireless information device (WID) and a controller for controlling the assembly, the apparatus comprising:

a first component (pg. 5, par. [0052] and Fig. 11, element AP1) that is one of the plurality of components (pg. 1, par. [0009], pg. 4, par. [0051]) and that is linked (Fig. 11, element CN) to the controller (pg. 3, par. [0028] and [0030] and Fig. 11, element CS) to facilitate at least a sub-process associated with the automated process (pg. 2, par. [0016] and pg. 7, par. [0071]), the first component including at least a first wireless receiver (pg. 3, par. [0025], i.e. receiver) for receiving wireless signals from the at least one WID (pg. 3, par. [0026], pg. 8, par. [0077] and Fig. 11, element MU); and

a processor (Fig. 11, element CS) receiving signals from the first receiver and running location determining software for determining the location of the at least one WID as a function of the signals received there from (pg. 8, par. [0077]).

De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure a stationary human machine interface (HMI) device including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device.

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically, a stationary human machine interface (HMI) device including at least one of an input device for receiving input directly from a human user of the HMI and a display for

providing information directly to a human user of the interface device since at the time of Applicant's invention was shown to be known in the art wherein an human-machine interface (HMI) device is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

10. As per claim 3, De Meyer teaches as set forth above at least one of the automated assembly components includes a mounting surface accessible within the environment and proximate the automated assembly and wherein the HMI is mounted to the mounting surface (pg. 3, par. [0024]).

11. As per claim 5, De Meyer teaches as set forth above the HMI includes the processor (Fig. 1, element CS) for determining location (pg. 8, par. [0077]).

12. As per claim 7, De Meyer teaches as set forth above the first component (Fig. 11, element AP) is linked to the controller (Fig. 11, element CS) via a communication network and is also linked to the processor via the communication network (pg. 3, par. [0028], pg. 4, par. [0041] and pg. 7, par. [0071]).

13. As per claim 9, De Meyer teaches as set forth above the processor (Fig. 11, element CS) is part of the controller (pg. 3, par. [0028] and [0030], pg. 5, par. [0077] and Fig. 11, element CS).

14. As per claim 11, De Meyer teaches as set forth above the first receiver is juxtaposed proximate the automated assembly (pg. 3, par. [0024] and [0026] and Fig. 11, element AP5) and wherein the apparatus further includes at least a second receiver (pg. 8, par. [0077], Fig. 11, element AP6, i.e. receiving devices) positioned at a second location relative to the automated assembly (Fig. 11), the second receiver also providing received signals to the processor the processor determining WID location as a function of the signals received from each of the first and second receivers (pg. 8, par. [0077]).

15. As per claim 12, De Meyer teaches as set forth above the environment includes at least a second automated assembly (Fig. 11, element OA3) controlled by the controller (Fig. 11, element CS) and including a second plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate an automated process (pg. 2, par. [0016]), the apparatus further including at least a second component (Fig. 11, element AP3) that is one of the second plurality of components and that is linked to the controller (Fig. 11, element CN), the second component including the second receiver (Fig. 11, element AP3, i.e. receiving devices)

for receiving signals from the at least one WID and providing the received signals to the processor (pg. 8, par. [0077]).

16. As per claim 13, De Meyer teaches as set forth above each of the first and second components are human-machine interfaces (HMIs) and each is linked to the controller via a communication network (pg. 8, par. [0077]).

17. As per claim 14, De Meyer teaches as set forth above the processor is embedded within the first HMI and wherein the second HMI is linked to the first HMI via the communication network (pg. 8, par. [0077], i.e. HMI communication module).

18. As per claim 15, De Meyer teaches as set forth above at least a third receiver (Fig. 11, element AP4, i.e. receiving devices) positioned at a third location relative to the first and second automated assemblies for receiving signals from the at least one WID (pg. 8, par. [0077]), the third receiver linked to the processor (Fig. 11, element CS) via the communication network (Fig. 11, element CN), the processor receiving signals from the first, second and third receivers and using the received signal to determine WID location (pg. 7, par. [0073]).

19. As per claim 16, De Meyer teaches as set forth above a wireless data system (pg. 3, par. [0025] and pg. 8, par. [0077]), the data system including a plurality of access points (Fig. 11, element AP3-AP6), each access point including a receiver (i.e.

"receiving devices") and a transmitter for receiving data from and transmitting data to the at least one WID, respectively (pg. 3, par. [0025]).

20. As per claim 17, De Meyer teaches as set forth above at least a sub-set of the access points (Fig. 11, element AP3-AP6) generates location information and wherein the location information is provided to the processor via the communication network and used by the processor to determine WID location (pg. 8, par. [0077]).

21. As per claim 18, De Meyer teaches as set forth above a wireless data system linked to the controller (Fig. 11, element CS) for transmitting data to and receiving data from the at least one WID (pg. 8, par. [0077]).

22. As per claim 19, De Meyer teaches as set forth above the wireless data system includes data receivers that are separate from the first receiver (pg. 8, par. [0077] and Fig. 11, element AP3-AP6, i.e. receiving devices).

23. As per claim 20, De Meyer teaches as set forth above the data system includes access points (Fig. 11, element AP3-AP6), each access point including one of the data receivers (pg. 8, par. [0077], i.e. "receiving devices") and also including a data transmitter (pg. 3, par. [0025]), information received by at least a sub-set of the data receivers provided to the processor (pg. 8, par. [0077]), the processor (Fig. 11, element

CS) using the information from the sub-set of data receivers and the first receiver to determine WID location (pg. 8, par. 0077]).

24. As per claim 21, De Meyer teaches as set forth above the first component also includes a first transmitter for transmitting data to the at least one WID (pg. 3, par. [0025]).

25. As per claim 22, De Meyer teaches as set forth above the first component includes a transmitter for wirelessly transmitting data (pg. 3, par. [0025]).

26. As per claim 23, De Meyer teaches a system comprising:

a controller (Fig. 11, element CS) for controlling an automated assembly (pg. 3, par. [0028] and [0030]);

at least one portable wireless information device (WID) that transmits wireless signals (Fig. 11, element MU);

at least a first automated assembly (Fig. 11, element OA4) including a plurality of components that together facilitate an automated process (pg. 1, par. [0009], pg. 4, par. [0051], pg. 7, par. [0071]), the plurality of components including a first component (Fig. 11, element AP5) linked (Fig. 11, element CN) to the controller to facilitate at least a sub-process associated with the automated process (pg. 2, par. [0016] and pg. 7, par. [0071]), the first component including a wireless receiver (pg. 8, par. [0077], i.e.

"receiving devices") for receiving signals from the at least one WID (pg. 8, par. [0077] and Fig. 11, element MU); and

a processor (Fig. 11, element CS) linked to the first component for obtaining signals from the receiver and running location determining software for determining the location of the at least one WID (Fig. 11, element MU) as a function of the received signals (pg. 8, par. [0077]).

De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure a stationary human machine interface (HMI) device including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device.

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically, a stationary human machine interface (HMI) device including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device since at the time of Applicant's invention was shown to be known in the art wherein an human-machine interface (HMI) device is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are

operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

27. As per claim 25, De Meyer teaches as set forth above at least one of the automated assembly components includes an accessible mounting surface and wherein the HMI is mounted to the mounting surface (pg. 3, par. [0024]).

28. As per claim 26, De Meyer teaches as set forth above the HMI includes the processor (pg. 8, par. [0077]).

29. As per claim 28, De Meyer teaches as set forth above the first receiver is juxtaposed proximate the automated assembly (pg. 3, par. [0024] and [0026] and Fig. 11, element AP5),

the system further including at least a second automated assembly (Fig. 11, element OA3) controlled by the controller (Fig. 11, element CS) and

including a second plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate a second automated process (pg. 2, par. [0016]), the second plurality of components including at least a second component (Fig. 11, element AP3) linked to the controller to facilitate at least a sub-process associated with the second assembly (pg. 3, par. [0077] and Fig. 11, element CN), the second

component including a second receiver positioned proximate the second assembly (Fig. 11, element AP3, i.e. receiving devices), the second receiver providing received signals to the processor, the processor determining WID location as a function of signals received from each of the first and second receivers (pg. 8, par. [0077]).

30. As per claim 29, De Meyer teaches as set forth above the second component is a human-machine interfaces (HMIs) (pg. 3, par. [0024]).

31. As per claim 30, De Meyer teaches as set forth above the processor is embedded within the first component (pg. 8, par. [0077]).

32. As per claim 31, De Meyer teaches a location determining assembly for use in an automated environment including at least a first automated assembly (Fig. 11, OA4) including components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) that facilitate an automated process (pg. 2, par. [0016]), at least one portable wireless information device (WID) (pg. 8, par. [0077] and Fig. 11, element MU) and a controller (Fig. 11, element CS) for controlling the assembly (pg. 3, par. [0028] and [0030]), the assembly comprising:

a first human-machine interface (HMI) (Fig. 11, element AP5) associated with the first automated assembly (pg. 5, par. [0052] and pg. 8, par. [0077]) and linked to the controller via a communication network (Fig. 11, element CN) for at least one of

providing information thereto and receiving information there from, the HMI (pg. 3, par. [0028] and [0030]), and a first wireless receiver (pg. 8, par. [0077], i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077] and Fig. 11, element MU); and

a processor (Fig. 11, element CS) receiving signals from the receiver and running location determining software for determining the location of the at least one WID as a function of the signals received therefrom (pg. 8, par. [0077]).

De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure a human machine interface (HMI) device that includes an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device.

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically, a human machine interface (HMI) device that includes an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device since at the time of Applicant's invention was shown to be known in the art wherein an human-machine interface (HMI) device is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are

operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

33. As per claim 32, De Meyer teaches as set forth above the environment further includes at least a second automated assembly (pg. 2, par. [0016] and Fig. 11, element OA3) controlled by the controller (Fig. 11, element CS) and wherein the assembly further includes a second HMI (Fig. 11, element AP3) associated with the second automated assembly (pg. 5, par. [0052] and pg. 8, par. [0077]) and linked (Fig. 11, element CN) to the controller (Fig. 11, element CS) to at least one of provide information thereto and receive information therefrom (pg. 8, par. [0077]), the second HMI including a second wireless receiver (pg. 8, par. [0077], i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077] and Fig.11, element MU), the processor (Fig. 11, element CS) receiving signals form each of the first and second receivers and determining WID location as a function of the received signals (pg. 8, par. [0077]).

34. As per claim 33, De Meyer teaches as set forth above the processor is embedded within the first HMI (pg. 8, par. [0077]).

35. As per claim 35, De Meyer teaches as set forth above the processor provides WID location determination information to the controller and the controller uses the location information to perform a location dependent function (pg. 8, par. [0077]).

36. As per claim 36, De Meyer teaches as set forth above the location dependent function includes one of providing location dependent information to the at least one WID and modifying control of the automated assembly (pg. 8, par. [0077]).

37. As per claim 37, De Meyer teaches a system for use in an automated environment including at least first and second automated assemblies (pg. 2, par. [0016], pg. 7, par. [0071], and Fig. 11, element OA3 and OA4) for performing first and second automated processes (pg. 5, par. [0052] and pg. 8, par. [0077]), at least one portable wireless information device (WID) (Fig. 11, element MU) and a controller (Fig. 11, element CS) for controlling the assemblies (pg. 3, par. [0028] and [0030]), the system comprising:

a wireless data communication system linked (Fig. 11, element CN) to the controller and for transmitting data to and receiving data from the at least one WID (pg. 8, par. [0077]);

a first human-machine interface (HMI) (Fig. 11, element AP5) linked (Fig. 11, element CN) to the controller to facilitate at least a sub-process associated with the first automated process (pg. 3, par. [0028] and [0030]) and including a first receiver for

receiving signals from the at least one WID (pg. 8, par. [0077], i.e. "receiving devices"), the first HMI positioned proximate the first automated assembly (pg. 3, par. [0024]) for providing information (par. 3, par. [0023] and [0024]);

a second human-machine interface (HMI) (Fig. 11, element AP3) linked (Fig. 11, element CN) to the controller (Fig. 11, element CS) to facilitate at least a sub-process associated with the second automated process (pg. 3, par. [0028] and [0030]) and including a second receiver (i.e. "receiving devices") for receiving signals from the at least one WID (pg. 8, par. [0077] and Fig. 11. element MU), the second HMI positioned proximate (pg. 3, par. [0024) the second automated assembly for at least one of providing information related thereto (par. 3, par. [0023] and [0024]); and

a processor (Fig. 11, element CS) receiving signals from the first and second receivers and running location determining software for determining the location of the at least one WID (Fig. 11, element MU) as a function of the signals received therefrom (pg. 8, par. [0077]).

De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure a human machine interface (HMI) device that allows a human to directly interface via a display device and receiving control instruction therefore directly from a human via an input device.

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically,

a human machine interface (HMI) device that allows a human to directly interface via a display device and receiving control instruction therefore directly from a human via an input device since at the time of Applicant's invention was shown to be known in the art wherein a human-machine interface (HMI) device is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

38. As per claim 38, De Meyer teaches as set forth above the wireless communication system (pg. 3, par. [0025] and pg. 8, par. [0077]) includes a plurality of access points (Fig. 11, element AP3-AP6).

39. As per claim 39, De Meyer teaches as set forth above the system of claim 37 wherein the processor is embedded in the first HMI (pg. 8, par. [0077]).

40. As per claim 40, De Meyer teaches a method for use in an automated environment including at least a first automated assembly (pg. 2, par. [0016], pg. 7, par. [0071], and Fig. 11, element OA4), at least one portable wireless information device (WID) (Fig. 11, element MU) and a controller (Fig. 11, element CS) for controlling the assembly (pg. 3, par. [0028] and [0030]), the assembly including a

plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate an automated assembly process (pg. 2, par. [0016], pg. 7, par. [0071], and Fig. 11, element OA4), the plurality of components including a first component (Fig. 11, element AP5) linked (Fig. 11, element CN) to the controller to facilitate an assembly sub-process (pg. 3, par. [0028] and [0030]), the method comprising the steps of: equipping the first component (Fig. 11, element AP5) with a wireless receiver (i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077]); receiving WID signals via the receiver (pg. 8, par. [0077]); and using the received signals to determine WID location (pg. 8, par. [0077]).

De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure a stationary human machine interface (HMI) device including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device.

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically, a stationary human machine interface (HMI) device including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device since at the time of Applicant's invention was shown to be known in the art wherein an human-machine

interface (HMI) is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

41. As per claim 41, De Meyer teaches as set forth above the step of equipping includes embedding the receiver (i.e. receiving devices) in the HMI (pg. 8, par. [0077]).

42. As per claim 42, De Meyer teaches as set forth above at least one of the automated assembly components includes a mounting surface accessible within the environment and proximate the automated assembly and wherein the method further includes the step of mounting the HMI to the mounting surface (pg. 3, par. [0024]).

43. As per claim 44, De Meyer teaches as set forth above the step of using the received signals includes providing a processor as part of the HMI and using the processor to determine WID location (pg. 8, par. [0077]).

44. As per claim 48, De Meyer teaches as set forth above the environment includes at least a second automated assembly (pg. 2, par. [0016], pg. 7, par. [0071], and Fig.

11, element OA3) controlled by the controller (Fig. 11, element CS), the second assembly including a plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate a second automated assembly process (pg. 5, par. [0052] and pg. 8, par. [0077]), the plurality of components including a second component (Fig. 11, element AP3) linked (Fig. 11, element CN) to the controller (Fig. 11, element CS) to facilitate an assembly sub-process (pg. 3, par. [0028] and [0030]), the method further including equipping the second component with a second receiver (i.e. "receiving devices") for receiving WID signals (pg. 8, par. [0077]), the step of receiving including receiving signals form each of the first and second receivers and the step of using the received signals to determine WID location including using the signals form each of the first and second receivers (pg. 8, par. [0077]).

45. As per claim 50, De Meyer teaches as set forth above the step of using includes providing a processor (Fig. 11, element CS), linking the processor to the first component via a communication network (pg. 7, par. [0071] and pg. 8, par. [0077] and Fig. 11, element CN), transmitting the receiver signals (i.e. "receiving devices") via the communication network to the processor and performing an algorithm via the processor to determine WID location (pg. 8, par. [0077]).

46. As per claim 51, De Meyer teaches as set forth above the step of linking additional receivers (i.e. "receiving devices") to the processor (Fig. 11, element CS),

obtaining additional WID signals (Fig. 11, element AP3R-AP6R) via the additional receivers and providing the additional WID signals to the processor via the communication network, the step of using further including using at least a sub-set of the signals received from each of the receivers to determine WID location (pg. 8, par. [0077]).

47. As per claim 54, De Meyer teaches a system for use in an automated environment including a plurality of automated assemblies (Fig. 11, element OA3 and OA4), each assembly including components that facilitate automated processes and at least one portable wireless information device (WID) (Fig. 11, element MU), the system comprising: at least a first processor (pg. 3, par. [0028] and [0030] and Fig. 11, element CS); a set of communication access points (Fig. 11, element AP3-AP6) configured to receive signals from, and transmit signals to, the WID (pg. 3, par. [0025] and pg. 8, par. [0077]; a set of wireless receivers (i.e. "receiving devices"), each wireless receiver integrated with a different component from a first sub-set of the assembly components and configured to receive signals from the WID (pg. 8, par. [0077]); and at least a first communication network (Fig. 11, element CN) linking at least a sub-set of the first subset component to the at least one processor and also linking each access point to the at least one processor (pg. 7, par. [0071]), the at least one processor obtaining WID signals from each of the receivers and also at least one of

transmitting signals to, and receiving signals from, each of the first sub-set assembly components, via the at least a first network (pg. 8, par. [0077]),

wherein at least a sub-set of the first sub-set of the assembly components includes human-machine interfaces (HMIs) (pg. 3, par. [0024]).

De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure each human machine interface (HMI) device includes at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device.

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically, each human machine interface (HMI) device includes at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device since at the time of Applicant's invention was shown to be known in the art wherein an human-machine interface (HMI) is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and

generate interactive process images or representations of the technical installation to be controlled.).

48. As per claim 56, De Meyer teaches as set forth above at least one processor (Fig. 11, element CS) both transmits signals to and receives signals from at least a sub-set of the first sub-set of assembly components via the network (pg. 3, par. [0028] and [0030] and pg. 8, par. [0077]).

49. As per claim 57, De Meyer teaches as set forth above the processor (Fig. 11, element CS) uses the obtained WID signals to determine WID location (pg. 8, par. [0077]).

50. As per claim 58, De Meyer teaches as set forth above the processor (Fig. 11, element CS) also uses WID signals received from at least a sub-set of the communication access points (Fig. 11, element AP3-AP6) to determine WID location (pg. 8, par. [0077]).

51. As per claim 59, De Meyer teaches as set forth above at least one processor (Fig. 11, element CS) includes at least a first processor (pg. 3, par. [0028] and [0030]) linked via the at least a first network (Fig. 11, element CN) to the access points (Fig. 11, element AP3-AP6) and at least a second processor (pg. 8, par. [0077], i.e. "HMI

communication module") linked via the at least a first network (Fig. 11, element CN) to the first sub-set of assembly components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) and wherein the at least a first network links the first and second processors together (pg. 7, par. [0071]).

52. As per claim 60, De Meyer teaches as set forth above the first sub-set of assembly components (Fig. 11, element OA4) includes a first component (Fig. 11, element AP5) and wherein the second processor is integrated into the first component (pg. 8, par. [0077]).

53. As per claim 62, De Meyer teaches as set forth above at least a first network (Fig. 11, element CN) includes at least a first network (Fig. 11, element CN) that links the communication access points (Fig. 11, element AP3-AP6) to the first processor (pg. 7, par. [0071]) and at least a second network that links the first sub-set assembly components to the second processor (pg. 1, par. [0006], pg. 3, par. [0024] and pg. 8, par. [0077], i.e. "HMI communication module").

54. As per claim 63, De Meyer teaches as set forth above at least a first processor (Fig. 11, element CS) is remotely (pg. 3, par. [0028] and [0030]) located from the first sub-set assembly components (pg. 8, par. [0077]).

55. As per claim 64, De Meyer teaches a method for use in an automated environment including a plurality of automated assemblies (pg. 2, par. [0016], pg. 7, par. [0071], pg. 8, par. [0077], and Fig. 11, element OA3 and OA4), at least one portable wireless information device (WID) (Fig. 11, element MU) and at least one controller (Fig. 11, element CS) for controlling the assemblies (pg. 3, par. [0028] and [0030]), each assembly including a plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate an automated assembly process (pg. 2, par. [0016] and pg. 7, par. [0071]), at least a first sub-set of the assembly components linked to the controller (Fig. 11, element CN) to at least one of provide signals thereto or receive signals therefrom (pgs. 2-3, par. [0016] and [0022]) and pg. 8, par. [0077]), the method comprising the steps of: equipping at least a sub-set of the first sub-set of assembly components with wireless receivers (i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077]); receiving WID signals via the receivers (pg. 8, par. [0077]); and using at least a sub-set of the received signals to determine WID location (pg. 8, par. [0077]).

De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure a stationary human machine interface (HMI) device includes at least one of an input device for receiving input directly from human user of the HMI and a display for providing information directly to a human user of the interface device.

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically, a stationary human machine interface (HMI) device includes at least one of an input device for receiving input directly from human user of the HMI and a display for providing information directly to a human user of the interface device since at the time of Applicant's invention was shown to be known in the art wherein an human-machine interface (HMI) is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

56. As per claim 65, De Meyer teaches as set forth above the step of equipping includes embedding receivers (i.e. "receiving devices") in the assembly components (pg. 8, par. [0077]).

57. As per claim 66, De Meyer teaches a system for use in an automated environment including at least a first automated assembly (pg. 2, par. [0016], pg. 7, par. [0071], pg. 8, par. [0077], and Fig. 11, element OA3 and OA4) including a plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) that

facilitate an automated process (pg. 2, par. [0016] and pg. 7, par. [0071]) and a controller (Fig. 11, element CS) for controlling the assembly (pg. 3, par. [0028] and [0030]), the system comprising:

at least a first wireless information device (WID) (Fig. 11, element MU) including a transceiver (pg. 3, par. [0025]) and a first processor (Fig. 11, element CS);

a first component (Fig. 11, element AP5) that is one of the plurality of components that is linked to the controller (pg. 7, par. [0071] and Fig. 11, element CN) to facilitate at least a sub-process associated with the automated process (pg. 8, par. [0077]), the first component including at least a first wireless transmitter for transmitting wireless signals to the at least one WID (pg. 3, par. [0025]);

at least one receiver (pg. 8, par. [0077], i.e. "receiving devices"); and

at least a second processor linked to the first component (pg. 8, par. [0077], element "HMI communication module") and to the at least one receiver, the at least a second processor running a program to determine WID position as a function of signal strength data generated by the transmitter and the WID (pg. 8, par. [0077]); and

the at least a second processor (Fig. 11, element AP5) obtains the signal strength data from the at least one receiver and uses the obtained data to determine WID position (pg. 8, par. [0077]).

De Meyer does not expressly teach within the same embodiment the at least a first transmitter transmits signals of known signal strength to the WID, the WID determines signal strengths and transmits signal strength data to the at least one

receiver; and De Meyer does not expressly teach outside the Field of and Background of the Invention section of the Disclosure a first component that includes a display device for presenting information to a human user and an input device for receiving input directly from a human user

De Meyer teaches the at least a first transmitter transmits signals of known signal strength to the WID (pg. 3, par. [0025] and pg. 8, par. [0076]; transmission from the HMI to the WID), the WID determines signal strengths and transmits signal strength data to the at least one receiver (pg. 8, par. [0076]; i.e. transmission from the WID to the HMI).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of De Meyer to include within the same embodiment the at least a first transmitter transmits signals of known signal strength to the WID, the WID determines signal strengths and transmits signal strength data to the at least one receive to advantageously downloaded or uploaded HMI data as a function of the location of the assigned universal mobile control and monitoring module in the regional control area of the assigned technical installation, in particular as a function of the distance from the technical installation (pg. 2, par. [0014]), with the use of emission systems for determining the position of the universal, mobile control and monitoring module (pg. 3, par. [0027]).

However, it would have been known to those of at least one of ordinary skill in the field of communications and interfaces to have used the tools at hand, specifically, a first component that includes a display device for presenting information to a human user and an input device for receiving input directly from a human user since at the time of Applicant's invention was shown to be known in the art wherein an human-machine interface (HMI) is an interface that allows a human to directly interface with a machine as taught in the Field of and Background of the Invention section of the De Meyer reference (pg. 1, par. [0003], [0004], [0006] and [0007]; i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

58. As per claim 67, De Meyer teaches as set forth above at least a first component (Fig. 11, element AP5) includes a plurality of components (pg. 3, par. [0025] and pg. 8, par. [0077]), each of the plurality including a separate transmitter (pg. 3, par. [0025]) and, wherein, the WID receives signals from at least a sub-set of the transmitters (pg. 3, par. [0025]), determines signal strength and transmits the signal strength data to the receiver (pg. 8, par. [0077]).

59. As per claim 68, De Meyer teaches as set forth above at least one receiver is separate from the at least one component (pg. 7, par. [0071] and pg. 8, par. [0077]).

60. As per claim 69, De Meyer teaches as set forth above at least one receiver (i.e. "receiving devices") is a communication access point that is part of a wireless communication network (pg. 8, par. [0077]).

61. Claims 4, 6, 10, 27, 34, 43, 45, 46, 49, 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Meyer in view of U.S. Patent Publication No. 2003/0234741 (hereinafter Rogers).

62. As per claim 4, De Meyer does expressly teach the first receiver includes a wireless antenna.

Rogers teaches to the receiver includes a wireless antenna (pg. 3, par. [0033] and Fig. 3, element 320).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a receiver with a wireless antenna to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

63. As per claim 6, De Meyer does not expressly teach the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location.

Rogers teaches to the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location (pg. 5, par. [0052] and [0055]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

64. As per claim 10, De Meyer does not expressly teach the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location.

Rogers teaches a statistical analysis on the received signals to determine WID location (pg. 5, par. [0052] and [0055]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a statistical analysis on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

65. As per claim 27, De Meyer does not expressly teach the location determining software causes the processor to perform at least one of a statistical analysis and a triangulation method on the received signals to determine WID location.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the received signals to determine WID location.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include at least one of a statistical analysis and a triangulation method on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

66. As per claim 34, De Meyer does not expressly teach the processor performs at least one of a statistical analysis and a triangulation method on the received signals to determine WID location.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the received signals to determine WID location.

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the applicant's invention to modify the teaching of De Meyer to include at least one of a statistical analysis and a triangulation method on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

67. As per claim 43, De Meyer does not expressly teach to the step of embedding includes integrating a wireless antenna with the HMI.

Rogers teaches to a wireless antenna (pg. 3, par. [0033] and Fig. 3, element 320).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a wireless antenna to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

68. As per claim 45, De Meyer does not expressly teach the step of using the processor includes at least one of performing a statistical analysis and a triangulation method on the location information received from the receiver.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the location information received from the receiver.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a statistical analysis and a triangulation method on the location information received from the receiver to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

69. As per claim 46, De Meyer teaches the step of receiving additional WID signals via other receivers (i.e. "receiving devices"), providing the other received signals to the processor (Fig. 11, element CS and pg. 8, par. [0077])

De Meyer does not expressly teach to performing the statistical analysis on the received WID signals.

Rogers teaches to performing the statistical analysis on the received signals (pg. 5, par. [0052] and [0055]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include performing the statistical analysis on the received signals to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

70. As per claim 49, De Meyer does not expressly teach to the step of using includes performing at least one of a statistical analysis and a triangulation method on the received signals to determine WID location.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the received signals to determine location.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include performing at least one of a statistical analysis and a triangulation method on the received signals to determine location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

71. As per claim 52, De Meyer does not expressly teach the step of equipping includes providing a port on the first component for receiving a linkage, providing an antenna, mounting the antenna and linking the antenna to the first component port via a linkage.

Rogers teaches to a wireless antenna (pg. 3, par. [0033] and Fig. 3, element 320) Connected to a network access devices (Fig. 3, element 300).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include to a wireless antenna connected to a network access devices to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

72. As per claim 53, De Meyer teaches as set forth above the first component is a stationary human-machine interface (HMI) device (pg. 3, par. [0024]).

73. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over De Meyer in view of U.S. Patent Publication No. 2004/0235468 (hereinafter Luebke).

74. As per claim 8, De Meyer does not expressly teach the network is an Ethernet network.

Luebke teaches to an Ethernet network (pg. 3, par. [0042]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include to an Ethernet network to minimizes latency by providing regional network coordinator (pg. 4, par. [0051]).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER L. NORTON whose telephone number is (571)272-3694. The examiner can normally be reached on Monday-Friday between 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Albert DeCady/
Supervisory Patent Examiner
Art Unit 2121

/JLN/